

What great fun! There is no better way to start off a review like this...

I have been a proponent of many different types of rifles for precision use for years. We all have our favorites and mostly for good reason. As is the case with anything we use and like, it is largely based on our experience with said product. That is fine, except many times we haven't experienced all the market has to offer before we settle on something we deem "the best" out there. Discussing this notion would take up plenty of space and ultimately there isn't a clear way to define "best" as well as the fact I type poorly and slowly... The notion I want to get across is the fact that "best" is relative and certainly based on perception. With that being stated, I wanted to bring another contender to the forefront for your consideration.

I have been building rigs with Howa 1500 barreled actions in various configurations for a while now. My customer base is mainly varmint and paper shooters with the balance falling into AR15 and tactical crowds. The popularity of the Howa has grown. As a result the accessory market has grown in turn. Jeff Allen at CDi Precision is building an aluminum detachable box magazine system and Pete Lincoln at Roedale has been at it for years in Europe with something very similar. Both CDi Precision and Roedale employ AICS mags. Howa does not intend to market or sell to professionals for professional use(s). However, for the rest of us, an affordable bolt action that combines fine construction, good looks, and inherent accuracy is a win, win, win. The popularity of building "trainer" rifles has really come around in recent months, and I can't help but wonder if this might be another inexpensive way to go for such a concept.

For this review the folks at Bell and Carlson were kind enough to provide one of their new vertical grip stocks, Timney provided a trigger, and the folks at Legacy Sports International who import the Howa 1500 offered up a prototype 20MOA canted EGW rail. From there I topped it with a USO SN3 5-25TPAL and a set of USO rings.



The Howa 1500 barreled action doesn't get enough credit in my opinion. The trigger is fine and easy to adjust featuring a three position safety. It is a flat bottom action with generous amounts of thread for action screw torque. It features a massive integral recoil lug and is easy to bed and easy to work with. Some of the Remington 700 bases fit the Howa 1500 action. The bolt can be twisted and the firing pin removed without a tool. Add all that up and it features a tough extractor to boot! The tolerances are quite good and the fit and finish is just fine. All in all, it has some fine attributes. My only dislike is the foot long disclaimer stamped in the topside of the barrel.







I'd give some commentary to USO for their scope and their rings, but I really don't need to... USO builds a fantastic product and it shows. I can honestly say I'm one of those guys that reflects Murphy's Law. If a quality control issue manages to squeak by an otherwise 100% perfect record, that single part will get shipped to me. The last USO I had built was troublesome, and even though the problems I had were a little unnerving, those people bent over backwards making it right and then some. In a perfect world I wouldn't have experienced problems. You and I rarely visit that world, so I prefer to take solace in the fact that USO will take care of you regardless.



When I put together a varmint package for the average shooter, rifles generally consist of the same types of things each time. All get skim bedded, all get trigger adjustments, some get aftermarket triggers, crown jobs, bolt handles, lapping, etc. For the purposes of this article I opted to bolt the barreled action into the stock with no improvements just to see what the average Joe would experience with such a package he could build himself. You can buy the plain barreled action sourced through Jerry's from your dealer and the Bell and Carlson stock all over. The precision shooting crowd is split a bit, but mainly we fall into two categories: those who have their work done fully or partially by smiths, or those of us who are do-it-yourselfers...

The test began with a barreled action and a stock lying in boxes. I bolted them together, added the base, the rings, the scope, and inspected the entire package – a once over, if you will, for debris and safety concerns. The first part of this article is essentially the “before” in a before and after story. After I test the rig as is, I’ll add the Timney trigger, skim bed the action, use a box of Tubbs Final Finish, and add a bolt knob. I’ll chart the results before and after with the same factory ammo, then I’ll try a couple of different kinds of factory ammo, just to satisfy my curiosity.

I took the rig to my 100 yard range I have at the shop. I then pulled the bolt and set it up on a set of Caldwell “greens” as they have become known. Although a \$30 set of bags, I’ve enjoyed using them as much or more than many bags or rests. They work very well for my purposes – if you want to use a front and rear rest setup I’m sure your results will be better. However, it is important to keep in mind this article is meant for the average “Joe” and caters to those items he’ll have. I’ve been shooting for years and I still don’t have a mechanical rest – one of these days... I peered through the bore and then the scope making tiny adjustments to the windage and elevation to essentially bore sight the rig. Although a true shade tree mechanic’s version of bore sighting, it is highly effective and generally gets you within four to eight inches of your intended spot.





At this point I fired a round aiming at a dot. Next I adjusted my elevation and windage to from my POA (point of aim) to my POI (point of impact) to zero the rig for 100 yards. I then fired a series of five round groups with Federal Gold Medal Match (part # GM308M) in 168gr. I know some of you are grumbling already, but 168s were all I had access to from Federal at the time. 175s and 155s are more popular as they generally fly to the magic 1000 yard mark better than 168s in my low altitude of 1092 feet, but this was all I had in great quantity. The results at this point were very impressive. I had some average groups and then I had some super groups. The average groups came first, and then as the barrel became "seasoned" the groups started to become really impressive. I've never been a "shoot and clean, shoot and clean" type of guy as that isn't the kind of shooting I generally do. I shot this rig right out of the box with only running a patch or two down the bore to remove any debris. I then shot all my groups for the "before" portion of the test.

My shooting conditions were relatively poor as it was -6F and the wind was blowing from my left corner to my right at about $\frac{3}{4}$ value between 4 and 6 MPH. I didn't allow for barrel cooling while shooting groups. I feel it is important to practice and evaluate like I shoot in common circumstances. Whether in a field of prairie dogs, a competition, or just poking AR500 plates, I generally let the bullets fly based more on time constraints, breathing, and wind, and less on barrel temperature. We can all find ways to make our shooting sessions easier with more pleasing results, but in the real world we rarely get these lucky breaks, so I'm a fan of practicing exactly the way I'm shooting 90% of the time. I usually shoot from the bench and the dirt about 50/50. I considered shooting this rig from the ground, but frankly it was too cold for that and I wanted some semblance of consistency so I could better note the changes from the "before and after" of the rig.





Tubbs Final Finish came next. I had rarely used this product in the past. It has widely been accepted for use in stock factory barrels, as the results are generally favorable. I bought the box of loaded ammunition and read the instructions. Pretty simple... Shoot five, and then clean. A series of shooting and cleaning sessions and you're done. I can tell you what ever powder they run isn't too snappy. I'm guessing they are just running enough powder to push things through... I aimed at a dot for the fun of it, and found the wind I had experienced for my initial testing groups was able to push the TFF loaded ammunition over nearly five inches at 100!





When doing this, it is important to keep a watchful eye on all things... Even David Tubbs makes a mistake from time to time...



The B&C stock was a very nice unit. This particular stock featured an aluminum bedding chassis that takes the place of pillars and genuinely serves as the spine of the stock. The barrel channel is oversized and allows the barrel to remain free from engaging the forearm. Even with heavy binding into the stock the bipod yielded no touching – many people shooting prone tend to “bipod load” the rig in an effort to remain stable and keep recoil consistent, so this is important. I liked the fit and finish of the unit and the vertical grip fit my hand well and gave me a good position on the trigger for good trigger control. I liked the recoil pad as well – nice and cushy! A quick skim bedding with MarineTex and we were off to the races.



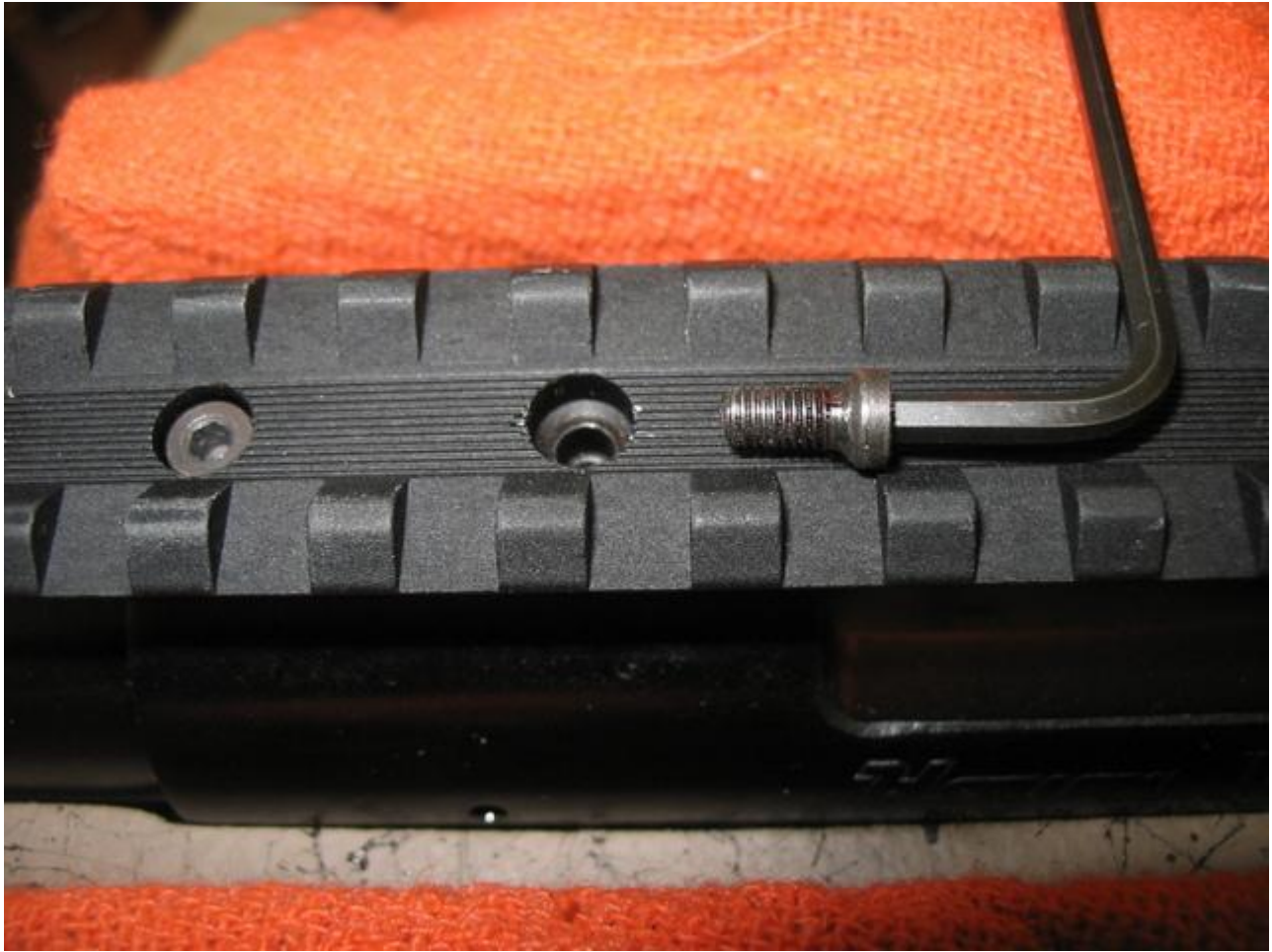
The Timney trigger was installed next. If you can operate a screw driver, you have half the battle won. Adjusting the trigger is very easy. Admittedly, the stock trigger is pretty darned good. I would have no problem settling for it, but the Timney seems to have a better sear break and I was tickled to have it. Combined with the low cost and the adjustability the Timney really is a wise upgrade in my opinion.

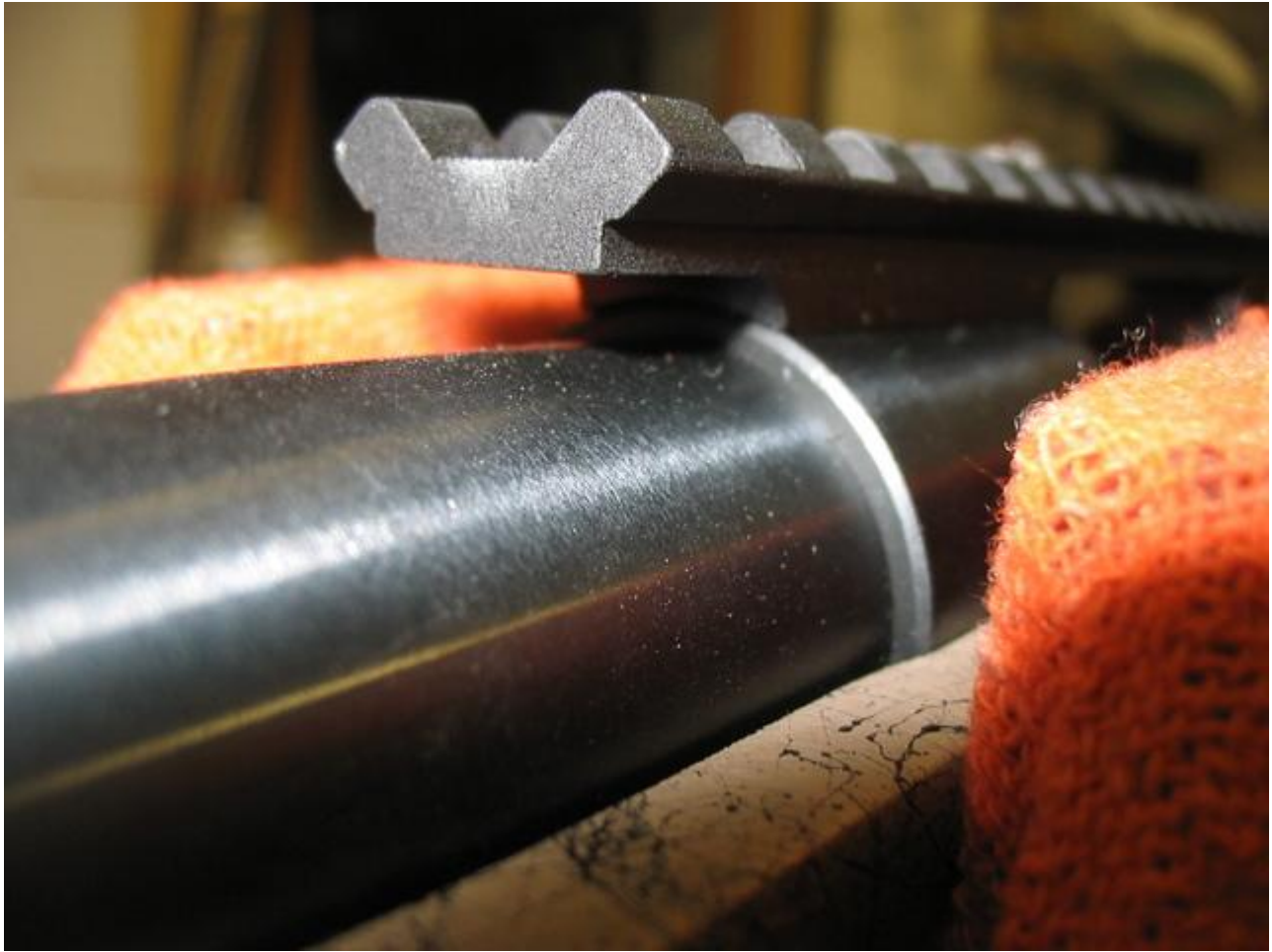


The bolt handle was turned, threaded, and the Cactus bolt knob was installed.



This has been my first experience with the EGW product. I have to say this rail lives up to the name they've created for themselves in the 1911 and AR15 circles. It is well built and strong. I especially like the counter sunk mounting hardware. If you look closely you'll see the mounting holes are already relieved to allow you to run a larger bit through them rendering them able to receive 8-40 mounting screws. This is a great idea in an age where scopes are getting larger all the time, connecting your scope to your action isn't something to overlook. I've been known to spend \$300 on a set of rings and \$3000 on a scope, so why not have the rail held on your action with a little more torque? Another thing about this rail is the height. Many out there are too tall – this one is nice and snug. It also has enough room out front to accommodate a longer spacing between rings and/or the ability to use rings of larger size.





Finally a thin coat of Brownells Alumahyde II was applied in matte black to blend the bolt knob and remove the "shine" from the stock bluing appearance. I prefer a dull or satin finish on most rigs to remove glare.



At this point I retested with the FGMM 168s (same lot #).

I also picked up some common ammunition being used by folks. I didn't have access to Cor Bon, HSM, or Black Hills, but those I did use are common and carry a fine reputation.



The retest was a damn cold day just like the initial testing. It is hard to put it in perspective, but when you see Flick in "A Christmas Story" with his tongue stuck to the flag pole, you get that chilled feeling don't you? As I began testing I made note that the wind was 2mph from left to right, so this ended up being nearly an identical value as compared to the initial testing. It was a balmy 7F outside and for the first time in quite a while I was actually glad to get up and fetch targets from time to time just to get the blood flowing and create a bit of warmth.

The performance... Below I have listed the before and after results with FGMM 168s. All groups are five shot groups from 100 yards.

Before:

- best group .532"
- worst group .876"
- average group .707"

After:

- best group .483"
- worst group .903"
- average group .653"

I have also listed the performance of the other ammunition. All groups are five shot groups from 100 yards.

Hornady 168gr TAP

- best group .747"
- worst group 1.694"
- average group 1.239"

American Eagle 150gr FMJ BT

- best group 2.481"
- worst group 2.836"
- average group 2.559"

Hornady 168gr AMAX match

-best group .470"
-worst group .660"
-average group .542"

The results were satisfying. We made a gain in performance. It is hard to chart just what lead to the performance gain, but it is safe to say it wasn't the matte finish or the bolt knob. The Timney trigger did help, as I could tell I had better trigger control. The bedding and the Tubbs Final Finish didn't hurt a bit, and I noticed the rig was easier to clean afterward as well. I only cleaned it when I was done due to how many people mentioned cleaning was less intensive after using the Tubbs treatment. I'd validate their findings. A bit of Wipeout and the bore was in pretty good shape.

The AE ammo was complete junk. My groups were completely vertical. This tells me there were velocity issues. I'd like to know just how much they were, but it was so cold the screen on the chrony wouldn't work. I'm guessing either there were powder issues or incomplete/inconsistent ignition, or it could have been both. Either way, they didn't perform well. The TAP ammo was below average in my opinion. I really expected better and even though it posted one good group, the balance wasn't worth mentioning. Both the Federal Gold Medal Match and the Hornady AMAX Match were genuine performers. >.5 MOA with the Federal and <.5 MOA with the Hornady will suit me fine. Just think what a tailored handload could do! You might be able to shave another .1 or .2 from it.

In conclusion I'd give this rig the nod as a budget shooter. Big bucks don't have to be spent for a great shooting rig that works well, looks good, and offers comfort. Kudos and congrats to all these folks for making great products.

Godspeed and good shooting folks!

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